

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES
				1 of 3
2. AMENDMENT/MODIFICATION NO. 5	3. EFFECTIVE DATE 26-Mar-2003	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. <i>(If applicable)</i>	
6. ISSUED BY US Army Corps of Engineers, Kansas City District 760 Federal Building, 601 East 12th Street Kansas City, Missouri 64106-2896		7. ADMINISTERED BY <i>(If other than item 6)</i>		
8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>		(x) 9a. AMENDMENT OF SOLICITATION NO. DACW41-03-R-0063 9B. DATED <i>(SEE ITEM 11)</i> 3/1/2003 10A. MODIFICATION OF CONTRACT/ORDER NO. 10B. DATED <i>(SEE ITEM 13)</i>		
CODE	FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above number solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing Items 8 and 15, and returning____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegraph which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(x)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBER CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF:
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

**Prospect Bridge and Brush Creek Re-Channelization
Kansas City, Missouri**

The Solicitation is amended in accordance with the attached pages.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

The SOLICITATION is amended as follows:

1. SPECIFICATIONS:

~~Narrative Changes:~~ The following are changes made narratively to the Specifications.

~~BIDDING SCHEDULE:~~

- a. Bid Item NO 0029 quantity has been changed from 620 square yards to 660 square yards. This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items
- b. Bid Item NO 0030 quantity has been changed from 90 cubic yards to 100 cubic yards. This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items
- c. Bid Item NO 0031 quantity has been changed from 2,130 cubic yards to 2,195 cubic yards. This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items
- d. Bid Item NO 0032 quantity has been changed from 90 cubic yards to 200 cubic yards. This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items.
- e. A copy of the revised Bidding Schedule is attached.

~~SECTION 02715 ANCHORS AND DRAINS:~~

- f. Paragraph D.1.b has been changed to read "Anchors defined in this section shall be classified as wall anchors, paving anchors, or dam anchors. Rock anchors shall be specified per Section 2710."

~~SECTION 03210 REINFORCING STEEL~~

- g. The section has been deleted and replaced with a revised section of the same number. A copy of the revised section is attached.

~~SECTION 03311 CAST-IN-PLACE STRUCTURAL CONCRETE FOR CIVIL WORKS~~

- h. Paragraph 3.2.3 Concrete on Rock Foundations is changed to read as follows: "Rock surfaces upon which concrete is to be placed shall be clean, free from oil, standing or running water, ice, mud, drummy rock, coating, debris, and loose, semidetached, or unsound fragments. Joints in rock shall be cleaned to a satisfactory depth, as determined by the Contracting Officer, and to firm rock on the sides. Immediately before the concrete is placed, all rock surfaces shall be cleaned thoroughly by the use of air-water jets or sandblasting as described in paragraph CONSTRUCTION JOINT TREATMENT. ~~TEXT DELETED.~~"

2. DRAWINGS:

- a. Sheet SC5.1: Note 5 has been added to the list of notes and it reads as follows: "All pavement reinforcement shall be epoxy coated."
- b. Sheet SC0.1: The following note is added: "Water Stop Detail is applicable to Dam 3, 4, 5, and 6 areas, as shown, for paving connections to the dams and channel walls."
- c. Sheets C5.3 and C5.7: The following note is added: "Handrail shall be attached as shown on Sheet C6.4 and in accordance with the manufacturer's recommendations for the modular block wall system."
- d. Sheet C6.2: The painting specifications for the walkway handrail are the same as specified for the bridge.

3. Offerors are required to acknowledge receipt of this amendment in the space provided on the SF30, or by separate letter or telegram prior to receipt of offers. Failure to acknowledge all amendments may cause rejection of the offer.

4. Proposals will be received until 2:00 p.m., local time, 3 April 2003, in Room 760 Federal Building, 601 E. 12th Street, Kansas City, Missouri 64106-2896. Points of Contact are as follows:

Contract Specialist:	Gregg Gulledge	816-983-3808
Project Manager:	Kent Myers	816-983-3399

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Demolition, General FFP "Demolition General", includes but not limited to, 22,250 square yards of channel paving to be broken, removed and placed in areas noted on the drawings or in the specifications; 8,100 square yards of channel paving to be broken and remain in place; 6,100 square feet of 12-inch thick asphalt pavement; all pipe shown to be grouted full in place, and all pipe shown to be removed. PURCHASE REQUEST NUMBER: W58XUW-2347-3613	1	Lump Sum		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Allowance		\$50,000.00

KCPL
FFP
KCPL", Reimbursement of work done by KCPL. Adjustment will be
made to the contract to match the amount billed by KCPL.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Lump Sum		

Sanitary Sewer
FFP

Sanitary Sewers" and 0004, "Storm Sewers" includes all earthwork, trenching, pipe, Manholes (includes the construction of manholes, including modifications to existing manholes, excavations, bracing of excavations, materials used for manhole construction, backfilling and manhole lids), Drop Inlets (includes construction of drop inlets, including modifications to existing drop inlets, excavations, bracing of excavations, materials used for drop inlet construction and backfilling), Curb Inlets (includes construction of curb inlets, including modifications to existing curb inlets, excavations, bracing of excavations, materials used for curb inlet construction and backfilling), Field Inlets (includes construction of field inlets, including modifications to existing field inlets, excavations, bracing of excavations, materials used for field inlet construction and backfilling), manhole lining, connections, temporary service and any other incidental work.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	Storm Sewer FFP	1	Lump Sum		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVI CES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	Clearing and Grubbing FFP Clearing and Grubbing" is for the clearing and grubbing work required and defined in SECTION: CLEARING, GRUBBING AND DEMOLITION.	1	Lump Sum		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006		28,560	Cubic Yard		

Rock Excavation

FFP

" Rock Excavation", includes all work required to excavate all rock units below the top of hard rock. Hard rock is defined as limestone.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007		226,930	Cubic Yard		

Common Excavation

FFP

" Common Excavation", includes excavation of all clay, silts, sand, gravel, pebbles, cobbles, boulders and shale.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008		58,700	Cubic Yard		
	Random Fill FFP " Random Fill", includes all placement of clay, silts, sands, gravel, pebbles, cobbles and top soil.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009		2,690	Cubic Yard		
	Impervious Fill FFP " Impervious Fill", includes all placement of clays (CH and CL).				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010		12,000	Cubic Yard		

Pervious Fill

FFP

" Pervious Fill", includes all delivery and placement of siliceous and natural sand to be used as backfill for channel walls.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0011		815	Cubic Yard		

Coarse Filter

FFP

"Coarse Filter", includes all delivery and placement of crushed limestone (ASTM C-33, size 7) to be used as backfill for channel walls.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0012	Quarry-Run Rock FFP " Quarry-Run Rock", includes all delivery and placement of tough, durable particles well graded between the maximum and minimum sizes. The upper limit of size for this material shall not exceed the layer thickness required. Not more than 15 percent shall pass the 2- inch sieve.	14,000	Ton		

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	Paved Slope Protection FFP "Paved Slope Protection", includes concrete and rock slope protection, placed into the concrete matrix, at the spacing indicated on the drawings.	10,200	Square Yard		

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0014		10,980	Square Foot		

Modular Block Walls

FFP

" Modular Block Walls", includes un-reinforced concrete footings,
geogrid strips, granular backfill, and related excavation.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0015		4,500	Square Yard		

6-inch Concrete Sidewalk

FFP

" 6-Inch Concrete Sidewalk", includes concrete with wire mesh,
surface subgrade preparation, crushed rock, concrete curb and
detectable paver blocks where required.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0016		1,200	Square Yard		
	8-inch Concrete Ramp Accessway FFP "8-inch Concrete Ramp Accessway", includes concrete with wire mesh, surface subgrade preparation and crushed rock.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0017		800	Square Yard		
	18-inch Concrete Channel Pavement FFP "18-inch Concrete Channel Pavement", includes anchors, reinforcing steel, and drains as shown on the drawings.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0018		1,330	Square Yard		
	12-inch Concrete Channel Pavement FFP				
	" Concrete Channel Pavement", concrete with reinforcing steel.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0019		3,200	Square Yard		
	6-inch Concrete Channel Pavement FFP				
	"6-inch Concrete Channel Pavement", includes reinforced concrete and anchors				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0020	Seeding and Mulching FFP Seeding and Mulching", includes seed and mulch		Lump Sum		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0021	Swope Parkway Trail FFP "Swope Park Trail", includes modular block wall with footings, crushed rock, subgrade preparation, 6-inch sidewalk, curbing and outlook concrete; reinforcing steel, expansion joints materials, handrails, handrail footings, signage and bike gap bollards. 8-inch concrete paving (8") is covered in the options.		Lump Sum		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0022			Lump Sum		

Drop Structure
FFP

"Drop Structure", includes select material; 4-inch drainpipe; 1-inch sponge rubber; coarse filter; reinforced drop structure concrete and 4-inch perforated pipe.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0023			Lump Sum		

Dam No.1
FFP

"Dam No. 1", includes structural dam reinforced concrete and gravity wall concrete.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0024			Lump Sum		
	Dam No. 2 FFP "Dam No. 2", includes structural dam reinforced concrete and gravity wall concrete.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0025			Lump Sum		
	Dam No. 3 FFP "Dam No. 3", includes 1, structural dam reinforced concrete and rock anchors. Channel walls that are monolithic with dam structures are also included in this bid item.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0026			Lump Sum		
	Dam No. 4 FFP "Dam No. 4", includes structural dam reinforced concrete and select material				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0027			Lump Sum		
	Dam No. 5 FFP Dam No. 5", includes structural dam reinforced concrete and select material.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0028			Lump Sum		

Dam No. 6

FFP

Dam No. 6", includes structural dam reinforced concrete and select material

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0029		660	Square Yards		

Anchored Walls

FFP

"Anchored Walls", includes reinforced concrete, wall anchors and drains. This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items.

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0030		100	Cubic Yards		

Gravity Walls
FFP

"Gravity Walls", includes gravity wall concrete outside of the definition of the dam in other bid items. This quantity accounts for channel support walls and access ramp support walls outside of the definition of the dam in other bid items.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0031		2,195	Cubic Yards		

L- Walls
FFP

"L-Walls". This quantity accounts for channel support walls and access ramp support walls outside the definition of the dam in other bid items.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0032		200	Cubic Yards		

T-Wall
FFP

"T-Walls". This quantity accounts for channel support walls and access ramp support walls outside of the definition of the dam in other bid items.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0033		6	Each		

Dam Intake Drainage Structure
FFP

"Dam Intake Drainage Structures", includes the cost excavate the soils or shore and brace soils, place concrete with all steel and backfill control structure. The reinforced concrete pipe will be associated with each structure is considered incidental. Trash racks, grating, manhole covers, gate and gate assemblies, that are associated with the Dam Intake Drainage Structures are included in this bid item.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0034			Lump Sum		

Pumpwell
FFP

"Pumpwell", includes all work required to construct the Pumpwell and to furnish and install the Pump. The grating and manhole cover associated with the Pumpwell are included in this bid item.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0035			Lump Sum		

New Prospect Bridge
FFP

"New Prospect Bridge" includes all costs to maintain all traffic controls, miscellaneous excavations, place foundations supports, drilled foundation caissons (piers), H-piles, construct steel support, abutments, construct all bridge decking materials, aesthetic facing requirements, graffiti protection, all miscellaneous metals, permanent concrete traffic barriers, bridge railings, and geotextile fabric and bridge approach slabs indicated on the drawings.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0036	Monolith Walls FFP "Monolith Walls", includes all work required to construct reinforced concrete Monoliths A, B, C D and E.	110	Cubic Yard		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0037			Lump Sum		

Electrical Work
FFP
"Electrical Work", includes 16 bridge lights, 4 light fixtures mounted to the bridge sub-structure for walkway illumination, panel board HA, conduit crossing at Station 8+00 +/-, pullboxes PB1 and PB2, all associated work to connect with the KCPL switchgear and transformer, all associated power and control wiring of recirculating pump, water probes and associated wiring, and fountain conduit rough-in as shown on the drawings. It also includes, "Traffic Intersection Signal Work", all traffic signs and signals not covered in the New Prospect Bridge bid item.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0038			Lump Sum		
	Prospect Ave-Pavement Curbs & Gutters, Walks & Islands, and Pavement Markings FFP "Prospect Ave - Pavement, Curbs & Gutters, Walks & Islands, and Pavement Markings", includes asphalt intermediate course, surface course, subgrade preparation, base course, prime coat, and tack coat. The work also includes earthwork, concrete curbs and gutters, concrete sidewalks, ramps, and traffic islands, new pavement markings, and temporary signage and flagmen, as required.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0039			Lump Sum		
	Ramp Bollards with Chains FFP " Ramp Bollards with Chains", include Bollards and equipment associated with access to the channel; and all excavations and backfill required to install the system.				

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0040			Lump Sum		
	Detour Signage FFP "Detour Signage", includes obtaining permits from Mo. Department of Transportation and the City of Kansas City, Missouri, placing and maintaining detour signs, barriers, barricades, and signal lighting.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0041			Lump Sum		
	Re-circulation System FFP "Re-circulation System", includes excavation, bedding, backfill, pipe, thrust blocks, valves, valve housings, reducers, and grate as indicated for the recirculation system and excavation, bedding, and backfill for fountain piping.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0042	Water Line FFP "Water Line" includes water line pipe, thrust blocks, valves, concrete, trenching, bedding, connections, and the disinfecting and testing of the new water line.	1	Allowance		\$10,000.00

NET AMT

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0043			Lump Sum		
OPTION	Swope Parkway Concrete Pavement FFP "Swope Parkway Concrete Pavement", includes forms, reinforcing, 400 cubic yards of 8-inch concrete pavement with joints, finishing & curing.				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0044			Lump Sum		

OPTION Sidewalk Lights
FFP
"Sidewalk Lights", includes, but is not limited to light poles, conduit,
wiring, lighting cabinet, as indicated on the drawings.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045					
OPTION	Plantings FFP				

"Plantings", includes providing the list of planting shown in the
specifications and planting at locations to be determined by the
Kansas City, Missouri, Parks and Recreation Department.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AA OPTION	Red Sunset Maple (2 1/2-in. cal.) FFP	12	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AB OPTION	Heritage River Birch (2 1/2-in. cal.) FFP	7	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AC OPTION	Cercis Canadensis Redbud (1 1/2-in. cal) FFP	6	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AD OPTION	Flowering Dogwood (1 1/2-in. cal) FFP	8	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AE OPTION	Autumn Purple Ash (2 1/2-in. cal) FFP	15	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AF OPTION	American Holly (2-in. cal) FFP	4	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AG OPTION	Sargent Crabapple (1 1/2-in. cal) FFP	12	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AH OPTION	Black Gum (2-in. cal) FFP	3	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AJ OPTION	White Pine (8-feet in height) FFP	31	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AK OPTION	London Planetree (2 1/2-in. cal) FFP	10	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AL OPTION	Swamp White Oak (2 1/2-in cal) FFP	5	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AM OPTION	Red Oak (2 1/2-in. cal) FFP	6	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AN OPTION	Bald Cypress (2 1/2-in. cal) FFP	7	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AP OPTION	Chanticleer Pear (2 1/2-in. cal) FFP	12	Each		

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045AQ			Lump Sum		
OPTION	Watering all Trees FFP				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0046		120,000	Square Foot		
OPTION	Turf Reinforcement Mat FFP "Turf Reinforcement Mat", includes all work required to provide furnish and install the Turf Reinforcement Mat, as indicated in the specifications				

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0047		4,000	Square Yard		

OPTION Paved Slope Protection
FFP
"Paved Slope Protection", includes all work required to furnish and install the additional rock and concrete slope protection, as indicated in the specifications.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0048			Lump Sum		

OPTION Invert Channel Protection
FFP
"Invert Channel Protection", (Sta. 12+70 to 30+80), includes all work required to provide 12,000 tons of tabular blocks of sound durable limestone.

NET AMT

FOB: Destination

ITEM NO	SUPPLIES/ SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0049		2,275	Square Yard		

OPTION 18-inch Concrete Channel Pavement
FFP
"18-inch Concrete Channel Pavement", includes all work required to provide 18-inch concrete channel pavement, in the Reach between the Prospect Bridge and Dam No. 3. The work includes anchors, reinforcing steel and drains, as shown on the drawings.

NET AMT

FOB: Destination

SECTION 03210

REINFORCING STEEL
09/97

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN CONCRETE INSTITUTE (ACI)

ACI 318 (1995) Building Code Requirements for
Structural Concrete and Commentary

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 53 (1999) Pipe, Steel, Black and Hot-Dipped,
Zinc-Coated, Welded and Seamless

ASTM A 184 (1996) Fabricated Deformed Steel Bar Mats
For Concrete Reinforcement

ASTM A 185 (1997) Steel Welded Wire Fabric, Plain,
for Concrete Reinforcement

ASTM A 615 (1996a) Deformed and Plain Billet-Steel
Bars for Concrete Reinforcement

ASTM A 675/A (1990a: R 1995e1) Steel Bars, Carbon,
Hot-Wrought, Special Quality, Mechanical
Property.

ASTM D 3963 (1993) Standard Specification for Epoxy-
Coated Reinforcing Steel

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

CRSI MSP-1 (1996) Manual of Standard Practice

1.2 SUBMITTALS

The contractor shall submit the following items to the Contracting
Officer for approval

SD-04 Drawings

Concrete Reinforcement System;

Complete shop drawings shall be submitted. The shop drawings shall be prepared under the direct supervision of a professional engineer licensed in the state of Missouri or Kansas. The shop drawings shall contain his seal and a statement certifying that they are in compliance with the specifications and contract drawings. The shop drawing shall

include details of the bending and placing schedule of the steel reinforcement, together with bar schedules indicating the number, size, dimensions, and total length of various bars required. Bar lists and bending diagrams shall be checked for accuracy and completeness before the bars are fabricated. Details of typical supports for reinforcing steel shall be approved prior to placing any concrete. Shop drawings shall show all concrete dimensions, location of all reinforcement, elevations, reinforcing steel clearances, and the location of all construction joints shown on the drawings or proposed by the Contractor. The drawings shall show support details including types, sizes and spacing. Spacing between vertical reinforcing steel shall be shown on the elevations. The minimum scale used in the shop drawings shall be 3/8-inch to the foot. Reinforcement bending details shall conform to the requirements of ACI SP-66.

SD-13 Certificates

Reinforcing Steel;

Certified copies of mill reports attesting that the reinforcing steel furnished meets the requirements specified, prior to the installation of reinforcing steel.

DELIVERY AND STORAGE

Reinforcement and accessories shall be stored off the ground on platforms, skids, or other supports.

PART 2 PRODUCTS

2.1 DOWELS

Dowels shall conform to ASTM A 675/A Grade 80. Steel pipe conforming to ASTM A 53, Schedule 80, may be used as dowels provided the ends are closed with metal or plastic inserts or with mortar.

2.2 FABRICATED BAR MATS

Fabricated bar mats shall conform to ASTM A 184.

2.3 EPOXY-COATED REINFORCING STEEL

Epoxy-coated steel reinforcement shall be used in the bridge deck and parapets only, conforming to the requirements of ASTM A 615, Grade 60. The epoxy coating materials and process, the fabrication, handling, identification of the steel, and the repair of any damaged coating material that occurs during fabrication and handling shall conform to the requirements of ASTM D 3963.

2.4 UNCOATED REINFORCING

Reinforcing steel shall be deformed bars conforming to ASTM A 615, Grade 60.

2.5 WELDED WIRE FABRIC

Welded wire fabric shall conform to ASTM A 185.

2.6 WIRE TIES

Wire ties shall be 16-gauge or heavier black annealed steel wire. Tie wires and metal clips shall be plastic or epoxy coated when used with epoxy-coated reinforcement.

2.7 SUPPORTS

Bar supports for formed surfaces shall be designed and fabricated in accordance with CRSI MSP-1 and shall be steel or precast concrete blocks. Precast concrete blocks shall have wire ties and shall be not less than by 4 inches square when supporting reinforcement on ground. Precast concrete block shall have compressive strength equal to that of the surrounding concrete. For epoxy-coated reinforcement, all wire bar supports and bar clips shall be plastic or epoxy coated. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface. For slabs on grade, supports shall be precast concrete blocks, plastic coated steel fabricated with bearing plates, or specifically designed wire-fabric supports fabricated of plastic.

PART 3 EXECUTION

3.1 REINFORCEMENT

Reinforcement shall be fabricated to shapes and dimensions shown and shall conform to the requirements of ACI 318. Reinforcement shall be cold bent unless otherwise authorized. Bending may be accomplished in the field or at the mill. Bars shall not be bent after embedment in concrete. Safety caps shall be placed on all exposed ends of vertical concrete reinforcement bars that pose a danger to life safety. Wire tie ends shall face away from the forms.

3.1.1 Placement

Reinforcement shall be free from loose rust and scale, dirt, oil, or other deleterious coating that could reduce bond with the concrete. Epoxy-coated reinforcing steel shall be handled and stored by methods that will not damage the epoxy coating. All systems for handling epoxy-coated reinforcement bars shall have adequately padded contact areas wherever possible. All bundling bands shall be padded and all bundles shall be lifted with a strong back, multiple supports, or platform bridges as to prevent bar-to-bar abrasion from sags in the bar bundle. Bars or bundles shall not be dropped or dragged. Epoxy-coated reinforcing steel shall be transported and stored on wooden or padded supports. Reinforcement shall be placed in accordance with ACI 318 at locations shown plus or minus one bar diameter. Reinforcement shall

not be continuous through expansion joints and shall be as indicated through construction or contraction joints. Concrete coverage shall be as indicated or as required by ACI 318 unless otherwise indicated on the drawings. If bars are moved more than one bar diameter to avoid interference with other reinforcement, conduits or embedded items, the resulting arrangement of bars, including additional bars required to meet structural requirements, shall be approved before concrete is placed.

3.1.2 Repair of Epoxy Coating

Any damage to epoxy coating of reinforcing steel shall be repaired whenever the size of any individual damaged area exceeds 0.065 square inches or whenever the sum of the areas of all damages within any one-foot-long portion of a bar exceeds 2 percent of the surface area of that portion of the bar. Should damage during shipment and installation exceed 2 percent of the surface area of an entire bar, that bar shall be removed and replaced with an acceptable bar. The sum of the areas covered with patching material applied during repairs at all stages of the work shall not exceed 5 percent of the total surface area of any bar. The patching material shall meet the requirements of ASTM D 3963. Patching of damaged areas shall be performed in accordance with the patching material manufacturer's recommendations.

3.1.3 Splicing

Splices of reinforcement shall conform to ACI 318 and shall be made only as required or indicated. Splicing shall be by lapping. Lapped bars shall be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 6-inches.

3.2 WELDED-WIRE FABRIC PLACEMENT

Welded-wire fabric shall be placed in slabs as indicated. Fabric laced in slabs on grade shall be continuous between expansion, construction, and contraction joints. Fabric placement at joints shall be as indicated. Lap splices shall be made in such a way that the overlapped area equals the distance between the outermost cross wires plus 2 inches. Laps shall be staggered to avoid continuous laps in either direction. Fabric shall be wired or clipped together at laps at intervals not to exceed 4 feet. Fabric shall be positioned by the use of supports.

3.3 DOWEL INSTALLATION

Dowels shall be installed in slabs on grade at locations indicated and at right angles to joint being doweled. Dowels shall be accurately positioned and aligned parallel to the finished concrete surface before concrete placement. Dowels shall be rigidly supported during concrete placement. One end of dowels shall be coated with a bond breaker.

-- End of Section --